

## BACKBONE ANCHORED THIOESTER AND SELENOESTER GENERATORS

### ABSTRACT OF THE DISCLOSURE

Thioester and selenoester generators, precursors thereof, thioester and selenoester compounds produced therefrom, and related methods for their production are provided. The subject thioester and selenoester generators include an amino acid synthon having an N-terminal group joined to a C-terminal group through an organic backbone comprising one or more carbons. The organic backbone contains a backbone nitrogen, anchored to a support through a nucleophile-stable linker that lacks reactive functional groups. The organic backbone may include a target molecule of interest, such as an amino acid, peptide, polypeptide or other organic compound of interest, and/or the N- and/or C-termini can be elaborated using a variety of synthesis approaches to provide a target molecule of interest. The compounds and methods find a wide variety of uses, including use in thioester- or selenoester-based chemical ligation techniques.

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